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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/566,069	05/01/2007	Werner Brandstatter	335.0111	9981

76444 7590 12/31/2009

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EXAMINER	
JENNINGS, STEPHANIE M	
ART UNIT	PAPER NUMBER
3725	

NOTIFICATION DATE	DELIVERY MODE
12/31/2009	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary	Application No.	Applicant(s)	
	10/566,069	BRANDSTATTER ET AL.	
	Examiner	Art Unit	
	Stephanie Jennings	3725	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *24 July 2009*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-43* is/are pending in the application.

4a) Of the above claim(s) *29-43* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☐ Claim(s) *1-28* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *24 July 2009* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *08 September 2009*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Election/Restrictions

1. Claims 29-43 withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected group, there being no allowable generic or linking claim. Election was made **without** traverse in the reply filed on March 5, 2009.

2. Applicant's election without traverse of claims 1-28 in the reply filed on March 5, 2009 is acknowledged.

Response to Arguments

3. Applicant's arguments, see page 12, filed 24 July 2009, with respect to claim 14 have been fully considered and are persuasive. The objection of April 24, 2009 has been withdrawn.

Claim Rejections - 35 USC § 112

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claim 1 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. There are no specifics for cathodic corrosion protection as the method merely involves electrolytically plating a layer onto the structure to protect the structure.

Claim Rejections - 35 USC § 103

6. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

7. Claims 1, 3, 4, 5, 9, 10, 18, 19, 24, 25, and 28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kefferstein et al. US Patent No. 6,564,604 in view of Chambaere et al. 4,978,586.

8. In regard to **claim 1**, Kefferstein discloses a method for producing a hardened profiled structural part from a hardenable steel alloy with cathodic corrosion protection, comprising: applying a coating to a sheet made of a hardenable steel alloy (column 1, lines 59-63),; subsequently roller-profiling the coated sheet steel in a profiling device, so that the sheet tape is formed into a roller-formed profiled strand; thereafter heating the coated sheet steel, at least in part and with the admission of atmospheric oxygen, to a temperature required for hardening, and heating the coated sheet steel to a structural change required for hardening (column 1, lines 56-57); (column 2, lines 15-19); and after sufficient heating, cooling the sheet, wherein the rate of cooling is set in such a way that hardening of the sheet alloy is achieved (column 2, lines 8-11).

9. Kefferstein discloses a method for producing a hardened profiled structural part, but does not disclose such a method with a zinc oxide coating.

10. In regard to **claim 1**, Chambaere teaches a coating comprises zinc, and the coating further comprises one or several elements with affinity to oxygen in a total amount of 0.1 weight-% to 15 weight-% in relation to the total coating wherein a skin

made of an oxide of the element(s) with affinity to oxygen is formed on the surface of the coating (column 4, lines 7-63).

11. It would have been obvious to one skilled in the art to provide the workpiece of the method of Kefferstein with the coating of Chambaere because an oxide skin provides corrosion protection.

12. In regard to **claim 3**, Kefferstein discloses the method in accordance with claim 1, comprising cutting the profiled strand into profiled strand sections prior to heating the profiled strand to the temperature required for hardening (column 1, lines 56-57).

13. In regard to **claim 4**, Kefferstein discloses the method in accordance with claim 3, comprising heating the profiled strand or the profiled strand sections, prior to being heated to the temperature required for hardening, in a heating step to a temperature that makes possible the partial formation of iron-zinc phases in the coating, and maintaining the profiled strand or the profiled strand sections at this temperature (column 2, lines 15-19).

14. In regard to **claim 5**, Kefferstein discloses the method in accordance with claim 3, comprising providing holes, cutouts, punched-out places and/or a required perforation pattern in the profiled strand or the profiled strands sections, prior to or following profiling and/or prior to or following the cutting to size, and prior to heating to the temperature required for hardening (column 1, lines 56-57 and 64-65).

15. In regard to **claim 9**, Kefferstein teaches the method in accordance with claim 1, comprising cooling the sheet in water (column 4, line 2).

16. In regard to **claim 24**, Chambaere teaches the method in accordance with claim 1, comprising coating the sheet with the mixture of zinc and the element(s) with affinity to oxygen during passage of the sheet through a liquid metal bath at a temperature of 425°C to 690°C and subsequently cooling the coated sheet (column 4, lines 7-63).

17. In regard to **claim 25**, Chambaere teaches the method in accordance with claim 1, comprising coating the sheet with the mixture of zinc and the element(s) with affinity to oxygen during passage of the sheet through a liquid metal bath at a temperature of 440°C to 495°C and subsequently cooling the coated sheet (column 4, lines 7-63).

18. In regard to **claim 28**, Kefferstein teaches the method in accordance with claim 1, comprising forming and hardening the structural component in a roller forming installation, wherein the coated sheet is heated, at least in parts, to the austenitizing temperature, is subsequently roller-formed prior to, during and/or after this and, following the roller forming, is cooled at a rate of cooling which causes hardening of the sheet alloy (column 1, line 56-column 2, line 25).

19. In regard to **claim 10**, Chambaere teaches a method in accordance with claim 1, wherein magnesium and/or silicon and/or titanium and/or calcium and/or aluminum and/or manganese and/or boron are used in the mixture as elements with affinity to oxygen (column 4, lines 7-63).

20. In regard to **claim 18**, Chambeare teaches a method in accordance with claim 1, wherein aluminum is substantially employed as the element with affinity to oxygen (column 4, lines 7-63).

21. In regard to **claim 19**, Chambeare teaches a method in accordance with claim 1, wherein the coating mixture is selected in such a way that in the course of heating the layer forms a surface oxide skin made of oxides of the elements with affinity to oxygen and the coating forms at least two phases, wherein a zinc-rich phase and an iron-rich phase are formed (column 4, lines 7-63).

22. Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kefferstein in view of Chambaere as applied to claim 1 above, and further in view of Ritter et al. US Patent No. 5,316,052.

23. Kefferstein in view of Chambaere does not disclose a coating method for a hardened steel part that involves welding.

24. In regard to **claim 2**, Ritter teaches a method in accordance with claim 1, comprising welding the profiled strand, which was profiled in a profiling installation, in a downstream-located welding device (column 2, lines 33-41)

25. It would have been obvious to one skilled in the art to provide the method of Kefferstein in view of Chambaere with the welding device of Ritter because welding is a method well-known in the art for mechanical joining.

26. Claims 6 and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kefferstein in view of Chambaere as applied to claim 1 above, and further in view of Ferguson US Patent No. 4,830,683.

27. Kefferstein in view of Chambaere does not teach the specific heating and cooling rates as specified in claims 6 and 7.

28. In regard to **claim 6**, Ferguson teaches the method in accordance with claim 1, comprising heating the profiled strand or the profiled strand sections to a temperature of 850°C to 950°C. at a heating rate of 50°C to 100°C per second, and maintaining the profiled strand or the profiled strand sections at this temperature for at least 5 seconds, and cooling the profiled strand or the profiled strand sections at a cooling rate of 25°C to 45°C per second (column 13, lines 59-64 and column 15, lines 16-39).

29. In regard to **claim 7**, Kefferstein teaches the method in accordance with claim 1, comprising, in the course of heating, maintaining the profiled strand or the profiled strand sections at 500°C to 600°C for at least 10 seconds, and subsequently further heating the profiled strand or the profiled strand sections (column 13, lines 59-64 and column 15, lines 16-39).

30. It would have been obvious to one skilled in the art to provide the method of Kefferstein in view of Chambaere with the specific heating and cooling rates of Ferguson because these rates allow for effective application of the coating of the workpiece.

31. Claims 8, 26, and 27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kefferstein in view of Chambaere as applied to claim 1 above, and further in view of Edmonds et al. US Patent No. 6,178,800.

32. In regard to **claim 8**, Kefferstein teaches the method in accordance with claim 1, comprising heating the profiled strand and/or the profiled strand sections (column 2, lines 1-2).

33. Kefferstein does not explicitly disclose a heating method; however, a rise in temperature of the metal part would have to result from some method or combination of inductive, convective, or radiative heat transfer. Edmonds teaches the use of radiant, conductive, or inductive heating as functional equivalents.

34. In regard to **claim 8**, Edmonds teaches a method of heating a workpiece to different temperature zones (column 4, lines 11-18).

35. In regard to **claim 26**, Edmonds teaches the method in accordance with claim 1, comprising inductively heating the sheet (column 4, lines 11-18).

36. In regard to **claim 27**, Edmonds teaches the method in accordance with claim 1, comprising heating the sheet in a radiation furnace (column 4, lines 11-18).

37. It would have been obvious to one skilled in the art to provide the method of Kefferstein in view of Chambaere with the zoned heating of Edmonds because zoned heating allows for formation of parts of the workpiece with different properties.

38. Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kefferstein in view of Chambaere as applied to claim 1 above, and further in view of Kim et al. US Patent Application Publication 2003/0059643 A1.

39. Kefferstein in view of Chambaere does not disclose a hot-dip galvanization process.

40. In regard to **claim 11**, Kim teaches a hot-dip galvanization process with zinc or aluminum (paragraph 65).

41. It would have been obvious to one skilled in the art to provide the process of Kefferstein in view of Chambaere with a hot-dip galvanization process as this a well-known workpiece coating method in the art.

42. Claims 12-17, 20-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kefferstein in view of Chambaere as applied to claim 1 above, and further in view of Imai et al. WIPO Publication No. WO 03/0335922.

43. An English translation of Imai is not immediately available, so the Imai et al. European Patent No. 1,439,240 A1 will be relied upon in this office action for citations.

44. Kefferstein teaches a method for applying a coating to a hardened profile part, but does not teach such a method with the coating applied via electrolysis. Imai, however, does teach this method.

45. In regard to **claim 12**, Imai teaches the method in accordance with claim 1, comprising applying the coating electrolytically (abstract).

46. In regard to **claim 13**, Imai teaches the method in accordance with claim 12, wherein in the course of the electrolytic coating first a zinc layer is deposited, and thereafter the element(s) with affinity to oxygen is (are) deposited on the applied zinc coating in a second step (abstract).

47. In regard to **claim 14**, Imai teaches the method in accordance with claim 12, comprising initially electrolytically depositing a zinc coating on the surface of the sheet,

and subsequently applying a coating of the elements(s) with affinity to oxygen to the zinc surface (paragraph 22).

48. In regard to **claim 15**, Imai teaches the method in accordance with claim 14, comprising applying the element(s) with affinity to oxygen by vapor deposition or other suitable coating processes (paragraph 24).

49. In regard to **claim 16**, Imai teaches the method in accordance with claim 1, wherein 0.2 weight-% to 5 weight-% of the elements with affinity to oxygen are used (paragraphs 34-39).

50. In regard to **claim 17**, Imai teaches the method in accordance with claim 1, wherein 0.26 weight-% to 2.5 weight-% of the elements with affinity to oxygen are used (paragraphs 34-39).

51. In regard to **claim 20**, Imai teaches the method in accordance with claim 19, wherein the iron-rich phase is embodied to have a ratio of zinc to iron of at most 0.95 ($Zn/Fe \leq 0.95$), and the zinc-rich phase a ratio of zinc to iron of at least 2.0 ($Zn/Fe \geq 2.0$) (paragraphs 46-55).

52. In regard to **claim 21**, Imai teaches the method in accordance with claim 19, wherein the iron-rich phase has a ratio of zinc to iron of approximately 30:70, and the zinc-rich face is embodied with a ratio of zinc to iron of approximately 80:20 (paragraphs 46-55).

53. In regard to **claim 22**, Imai teaches the method in accordance with claim 19, wherein the layer contains individual areas with zinc proportions >90% zinc (paragraphs 46-55).

54. In regard to **claim 23**, Imai teaches the method in accordance with claim 1, wherein the coating is formed in such a way that, at a thickness of 15 µm, it develops a cathodic protection effect of at least 4 J/cm^2 after heating (paragraphs 77-78).

55. It would have been obvious to one of ordinary skill in the art to combine Imai's and Kefferstein's inventions because electrolysis is a well-known metallic coating application method in the art.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Stephanie Jennings whose telephone number is (571) 270-7392. The examiner can normally be reached on Monday-Thursday, 7 am - 5:30 pm EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dana Ross can be reached on (571) 272-4480. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/S. J./
Examiner, Art Unit 3725
December 4, 2009

/Dana Ross/
Supervisory Patent Examiner, Art Unit 3725